Program Narrative

Statement of the Problem

The United States is currently experiencing an unprecedented crisis in the opioid epidemic with 2016 opioid deaths at rates 5 times higher than 1999 (CDC, 2017). Tennessee is one of several states contributing to this problem with significant increases in opioid deaths since 2014. From 2014 to 2016, the number of opioid deaths grew from 1,269 to 1,630, an increase of 28.4% (CDC, 2017). According to the CDC, drug overdose (OD) deaths in Tennessee increased significantly from 2014 to 2015 (13.8%) and again from 2015 to 2016 (10.4%).

The rate of retail opioid prescriptions is likely contributing to the problem in the state. In 2016, Tennessee had a retail opioid prescribing rate of 107.5 prescriptions per 100 persons, ranking the state 3rd highest behind Alabama (121/100) and Arkansas (114.6/100). Interestingly, the 4th highest rate was in Mississippi (105.6/100) (CDC, 2017). Tennessee shares its western and southern borders with all these states.

Shelby County, the state's largest county and home to Memphis, the state's 2nd largest city, is also at the forefront of the battle. In Shelby County during 2016, more than 200 people died from opioid OD, more than 500 had emergency room (ER) treatment, and nearly 1,700 doses of Narcan were administered by the Memphis Fire Department (MFD) alone. The 2016 rate for opioid-specific fatal ODs in Shelby County was 16 per 100,000, which is 60% higher than the national average (TN Dept. of Health). This was an 11% increase from the prior year's rate, and a 90% increase over the rate in 2012. In 2017, the impact of the epidemic worsened, with approximately 250 deaths and almost 2,500 Narcan dosages administered, a 210% increase in Narcan treatment over 2010 (City of Memphis EMS). As of May 30, 2018, 926 doses had been administered and cluster in predictable areas of the city. However, ODs also are occurring

in outlying areas that might not be so predictable, such as Bartlett, Cordova, and Germantown (see *Figure 1*).

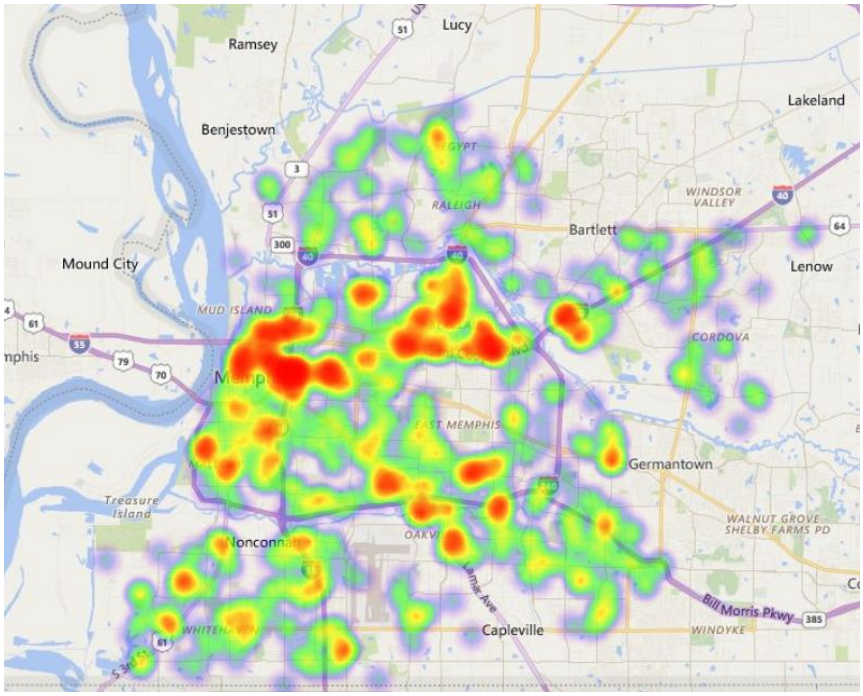

Figure 1*: January 1-May 30, 2018 Narcan Administrations (Source: Memphis Fire Department)*

Opioid-related emergency department visits also increased from 175 in 2014 to 900 in 2017. This represents a 73% annually compounded growth rate. If this rate were to continue for seven years, opioid-related visits would equal all other emergency department visits.

Furthermore, calls for service (CFS) related to opioid ODs more than doubled since 2014. During the 6-month period from July 1 to December 31, 2017, there were 656 CFS noted as "Drug Overdose." These are mapped below (see *Figure 2*). Redder areas indicate areas from which a greater number of CFS for "drug overdose" originated. While not all CFS may have been actual ODs or opioid ODs, this is a good starting point for further investigation.

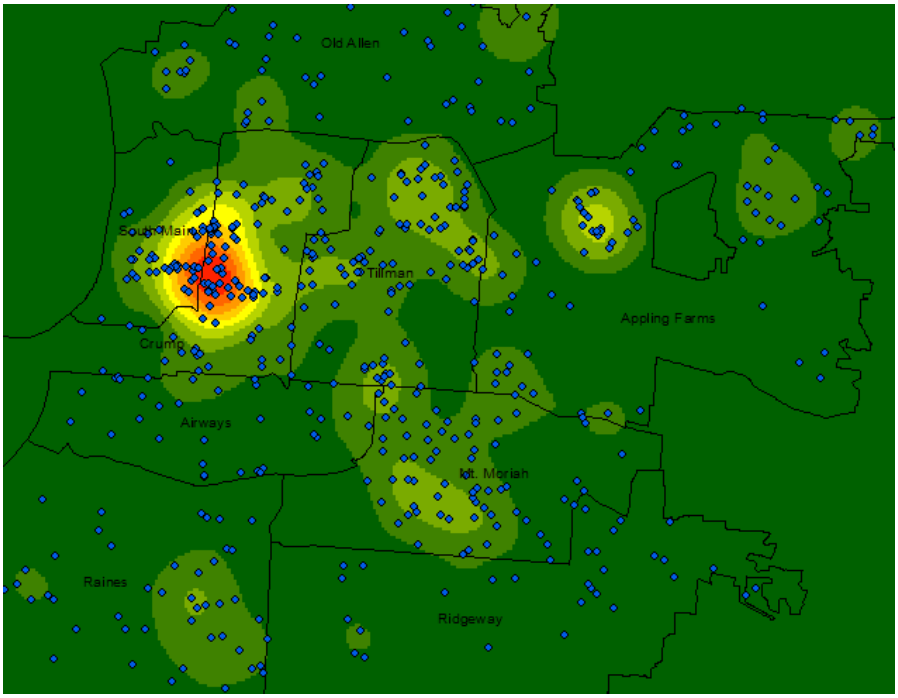

***Figure 2**: July 1-December 31, 2017 Drug Overdose Calls for Service (CFS) (Source: MPD)*

It is important to note that, while the state of Tennessee shares its borders with other high opioid states of Arkansas, Mississippi, and Alabama, Shelby County also shares borders with 2 of these states (Arkansas and Mississippi) and is within a 2-hour drive of the Alabama border. In 2010, the county was designated a High Intensity Drug Trafficking Area (HIDTA) due to heavy use of the Interstate 40 corridor by drug trafficking organizations and due to the FedEx hub being exploited for ground and air distribution of drugs.

In addition to growing rates of deaths, prescriptions, ER visits, etc., various data collected by MPDs Heroin Response Team (HRT) indicate an increasing problem. While scene investigations increased 38.4% from 2016 to 2017 and fatalities remained constant, non-fatalities increased more than 50% (*see Figure 3*). From 2016 to 2017, ODs increased but were less likely to be fatal. In 2016, 23.3% were fatal, but in 2017, only 16.5% were fatal. However, data from January 1 to April 3, 2018 indicates this downward trend is not continuing. Of 77 scene investigations during this period, 16 (20.8%) were fatal.

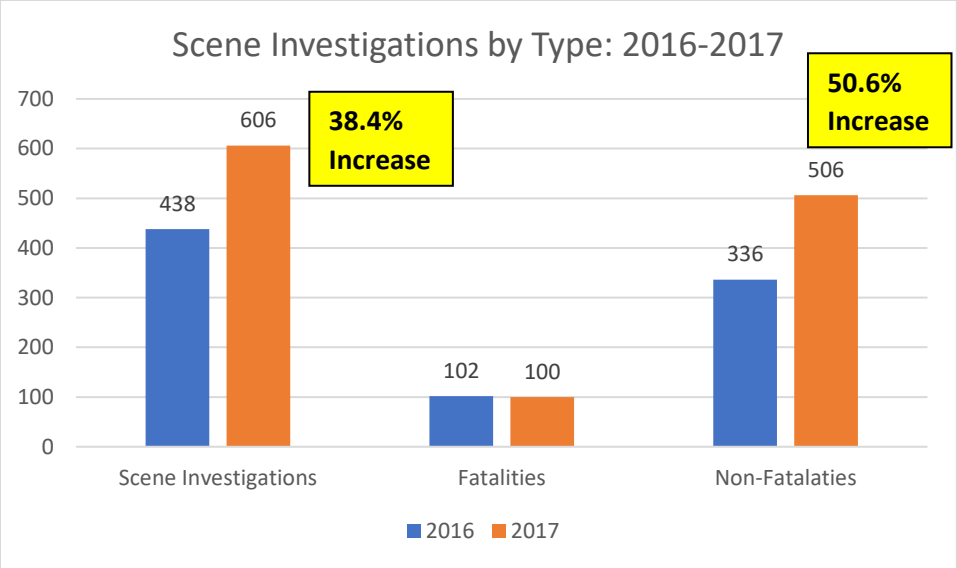

Figure 3: *Scene Investigations by Type: 2016-2017 (Source: MPD Heroin Response Team)*

While individuals who have one non-fatal OD represent the bulk of victims, the proportion of victims with multiple ODs is increasing. In 2016, only about 10% of victims were repeats during the same year, but that proportion had grown to 13% in both 2017 and 2018 (as of April 3). In addition, the HRT has seen an increase of more than 75% in the number of repeat victims in the same year (*see Figure 4*).

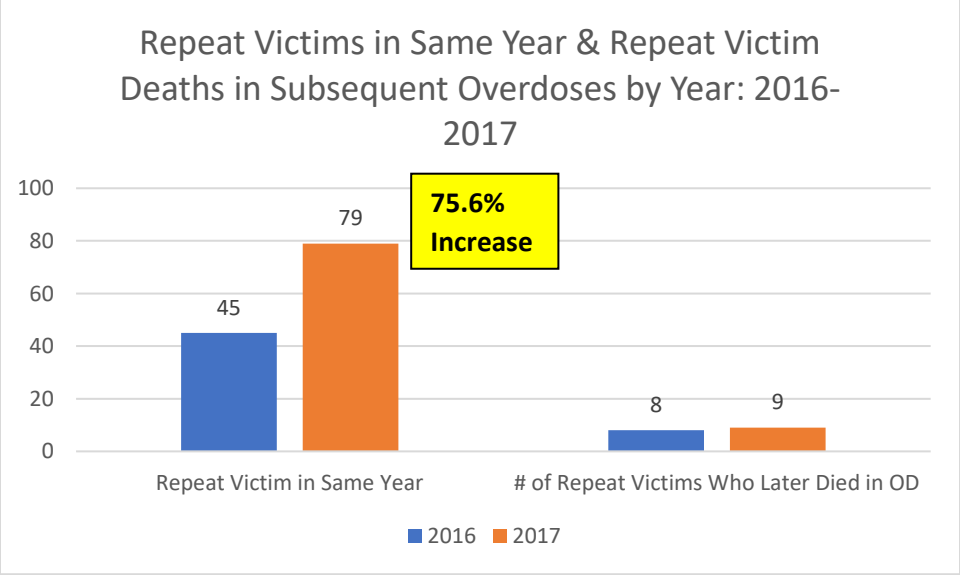

Figure 4: *Repeat Victims in the Same Year & Repeat Victim Deaths in Subsequent Overdoses: 2016-2017 (Source: MPD HRT)*

Moreover, while the number and proportion of repeat victims who subsequently died from an OD seemed small in 2016 and 2017, numbers from 2018 are not so encouraging. As of April 3, 2018, 20% of repeat victims since the beginning of the year have subsequently died from an OD.

The growing scope of the opioid problem in Shelby County is reflected in the amount of heroin and fentanyl seized in 2016 and 2017 (*see Figure 5*). The grams of heroin seized in 2017 was 277.5% higher than in 2016. Fentanyl seizures were not tracked in 2016.

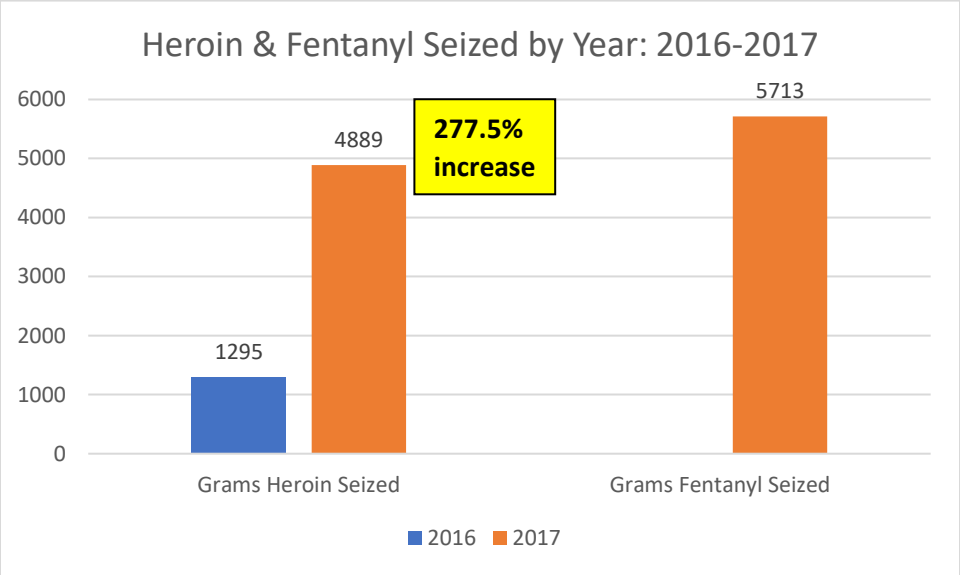

***Figure 5**: Grams of Heroin & Fentanyl Seized by Year: 2016-2017 (Source: MPD Heroin Response Team)*

The opioid problem also impacts municipalities and areas of unincorporated Shelby County. In 2017, the Special Investigations/Narcotics unit of the Shelby County Sheriff's Office (SCSO) seized 731 grams of heroin, 7,909 units of a schedule II controlled substance, 50,414 units of a schedule III controlled substance, 10,000 units of a schedule IV controlled substance, and 4,443 units of other drugs.

Treatment has not kept pace as the epidemic has grown. Despite a strong statewide push for higher levels of medication-assisted treatment (MAT), per capita MAT prescriptions in

Shelby County fell 10% in 2016. The share of the population in Shelby County needing, but not receiving, treatment for drug abuse or dependence rose 18% from 2010 to 2014 (SAMHSA).

Existing Services & Gaps-Sequential Intercept Model

Existing services and gaps are identified below using the Sequential Intercept Model (SIM). The proposed program will connect individuals at high-risk of OD (HROD) to the Center for Addiction Science (CAS) at the University of Tennessee Health Science Center (UTHSC) and will develop diversion strategies at several intercepts for HROD who have, or are at risk of having, justice-system involvement.

Intercepts 0 & 1: Crisis Response, Law Enforcement & Emergency Services: Current procedure related to opioid OD varies by jurisdiction. In the city, EMS typically is first on scene, administers Narcan, then uniform patrol arrives. Uniform patrol contacts a special investigations unit, who then contacts the Heroin Response Team (HRT). If the incident involves a fatal OD, the HRT supervisor dispatches a team of investigators to conduct an on-scene investigation. If the incident involves a non-fatal OD, the supervisor assesses the call and determines whether a team will respond (based on victim condition, willingness to cooperate in investigation).

In the county, the first responder depends on who is geographically closer or how the call is dispatched. If the SCSO is first on-scene, EMS will be requested and then Narcan administered until EMS arrives to relieve the officer. If EMS is on-scene first, they will treat appropriately and the SCSO will make a report. In both situations, if the person is conscious and refuses further medical treatment nothing more can be done. Depending on the circumstances (evidence at the scene, other persons on scene), Patrol may contact a Narcotics detective to investigate further, but if that is not warranted, the response is complete. A gap at these

intercepts involves connecting victims to treatment and services at the scene or as soon as possible after transportation from the scene (most likely to a hospital).

Intercept 3: Jails/Specialty Courts: Jail medical services are provided by a contracted medical provider employed by Shelby County Health Department (SCHD). Jail medical conducts basic medical and mental health screening of all entrants to identify acute and chronic mental health risks including alcohol and addictive drug abuse and/or risk of overdose but does not intensively screen for risk of opioid OD. Jail medical is the only entity that touches everyone booked into the jails, so this is the best opportunity to develop and implement a screening and referral process that will reach the most justice-involved individuals who may be at risk of OD.

Gaps at this intercept are no specific opioid screening, no drug treatment (other than abstinence), no connection of HROD jail entrants to treatment and services, and no communication between jail medical and Pretrial Services (PTS), who could incorporate recommendations for connection to treatment/services into their presentence investigation reports. Furthermore, although our county has a Drug Court, many HROD are ineligible for the program and/or have previously failed to complete the program. Providing viable options to connect these "drug court rejects" to treatment and services would address another gap.

Intercept 4: Reentry from Jails and Prisons to the Community: Although locally sentenced inmates at the Shelby County Division of Corrections (SCDC) are screened at entry using the Texas Christian University Drug Screen-5 (TCUDS-5) opioid supplement and those with addictions are given the opportunity to enter an institutional treatment program, the capacity of the program cannot accommodate demand. Most on the waiting list are released before they can enter the program. Connecting high-risk individuals to treatment and services in the community upon release would potentially compensate for lack of institutional capacity.

Intercept 5: Community Corrections: Currently, probation agents monitor supervisees with random fluid-based screenings. Although these panels screen for opioids, there is no other type of screening. If supervisees test positive, they are referred to an in-house SUD program. If they require detox, a referral is made to a community service provider. Screening by asking questions, then referring to peer navigators for connection to community-based treatment and services may be more effective than referring only on positive fluid test. Asking questions to determine risk is less intrusive and individuals connected to peer navigators may feel less forced into compliance and more encouraged. This is a gap that our program will address.

Partner Agencies

Partner agencies that have collaborated to develop this coordinated response to our opioid epidemic include the SCHD, the SCDC, MPD, the SCSO, the EMS, emergency services at Baptist Memorial Hospital and Regional One (ERs), and the Public Safety Institute (PSI) at the University of Memphis (UM). Letters of support are attached along with resumes for key personnel.

The primary partner and subawardee is the CAS at the UTHSC. The CAS, established in 2016, provides clinical treatment services including cognitive behavioral therapy, MAT, motivational enhancement therapy and 12-step program facilitation. This connection will facilitate the expansion in Shelby County of cognitive behavioral treatment (CBT) in conjunction with MAT to help individuals participate in treatment, modify attitudes and behaviors regarding opioid abuse, and improve their life skills. Moreover, the CAS has established relationships with community service providers, who could implement wraparound services for counseling, behavioral health, and case management for things like job placement, housing, transportation and adequate food. This program will help expand those relationships.

Components Required to Implement the Program

Components required to fully implement the program include assessing for risk of opioid OD, training first responders, and connecting individuals at high risk of opioid OD to treatment and services at various intercepts through peer navigators. Implementation will require a stakeholder team, a Project Coordinator (PC), 3 peer navigators, a Research Partner (RP), and a cadre of community partners. The program design is fully explained in the following section "Program Design and Implementation."

Need for Federal Funding

Federal funding is critical to develop and implement this program, which proposes to connect those at the forefront of the crisis in the community (first responders, law enforcement) to those at the forefront of the crisis in the criminal justice system (Community Services, Pretrial, jail, Corrections, prosecutors) to those at the forefront of the crisis in the medical world (clinicians, counselors, physicians). Local and state budgets already are strained addressing other community problems, such as gun, domestic, and youth violence. These types of challenges are more visible and absorb more discretionary governmental funds. Local agencies tend to receive funding to help disrupt the sale and transportation of drugs, which includes long-term investigations to prevent opioids from getting into the hands of users, rather than funding to help addicts seek treatment. Average citizens, as well as many local government representatives, also do not understand the devastating impact that opioid addiction has on local communities. As a result, they are reluctant to consider allocating funds to counteract it.

Although identifying and referring HROD to treatment is feasible with funding under this solicitation, subsequent events are not. The medical assessments, counseling, case management, MAT, and other things required to treat substance use disorders (SUD) are not feasible with

funds from this grant. Thankfully, however, the CAS has received a one-time allocation from the state of Tennessee of $2 million for research, education and clinical service. With this funding, the CAS will develop an addiction medicine network for West Tennessee (clinical service), establish tele-education for primary care physicians in SUD, and perform clinical research regarding the effectiveness of approaches to MAT that decrease relapses. Moreover, on June 4, 2018, the Shelby County Commission awarded CAS a one-time allocation of another $2 million to support the infrastructure for the "addiction specialist recovery specialist" (APRS) program. These funds will support the Director of APRS, the cost of behavioral health specialists, addiction medicine physicians, and case managers who will work closely with APRS and individuals they identify to enter treatment. These funds also will be used to subsidize costs of care for uninsured individuals. It also is likely that APRS beyond the 3 APRS funded from this grant will be required to provide 24/7/365 on-call service. If that is necessary, those APRS will be hired using either state or county funds. The CAS also is seeking local private funding to support it in the medical-related activities beyond the one-time allocations described above.

Project Design and Implementation

The APRS, developed by CAS to link individuals with SUD to treatment and case management services, bridge the gap between victims and resources and will be on-call 24/7/365 with law enforcement, EMS, and local emergency rooms working to identify patients and encourage them into treatment. On each non-fatal OD, an APRS will be called out to assist the first responder in encouraging the victim into treatment. This may involve the APRS accompanying the victim to the hospital or following up with law enforcement the next day, depending on the victim's state of consciousness and agitation at the scene. Although not part of

this request for funding, CAS will train first responders in "screening, brief intervention, and referral to treatment (SBIRT)" to increase referrals to CAS.

In addition to connecting OD victims to treatment and services, APRS will connect to other HROD at various intercepts in the criminal justice system. Justice system partners on this application are committed to developing and incorporating policies and procedures that will allow screening and referral of HROD to treatment and services through connection to APRS. In some cases, justice-involved individuals already are screened for opioid use. However, there is no current determination of what screening results constitute "high risk" of overdose. One of the tasks of the stakeholder team, with substantial input from those representatives from the medical community, would be to review and evaluate existing mechanisms for determining risk of opioid OD and select a tool that would work best for us. For example, the SCDC uses the Texas Christian University Drug Screen-5 (TCUDS-5) and the Opioid Supplement, which consists of 17 questions designed to screen for opioid involvement. However, the 9 questions suggested by the Prescription Drug Monitoring Program Training and Technical Assistance provider (PDMPTTA) specifically assess risk of opioid OD (http://www.pdmpassist.org/pdf/PDMP_admin/assessing_overdose_risk_intake_20170217.pdf). Whichever tool is selected, it will be brief enough to easily incorporate into daily practice, and simple for justice-system users to administer and interpret. We will consult the TTA provider to assist in this review and selection process.

The goal of our program is to ***reduce opioid ODs***. We will attain this goal through the following objectives:

1) to increase the number of ***screenings*** for risk of OD;

2) to increase the number of ***referrals*** to CAS;

3) to increase the number of ***connections*** of individuals to CAS;

4) to increase the number of ***enrollments*** in SUD treatment via CAS;

5) to increase the number of ***diversions*** from incarceration to CAS.

These objectives connect to several of the overarching objectives of the COAP solicitation. Specifically, Objectives 1 and 2 will expand law enforcement and victim service partnerships, all Objectives rely on comprehensive cross-system planning and collaboration, and the entire project is attempting to identify and connect to treatment/services "high frequency" utilizers of multiple systems who have histories of opioid abuse.

The primary aim of our strategy is to identify and effectively divert OD victims and potential OD victims into treatment. Improving first response and diverting victims into treatment eventually will lessen the impact of the opioid crisis on law enforcement by reducing the population of those addicted and likely to OD, and by increasing the likelihood and effectiveness of the prosecution of traffickers/distributors. Identification and diversion will be accomplished by linking first responders with public health agencies and health care providers via integration of the APRS and by training first responders in protocol to help them more effectively respond to and refer OD victims to services. Connecting more victims to treatment will reduce ODs, petty crime related to drug addiction, recidivism, and demand for opioids.

Additionally, providing opportunities for screening and referral along several other of the justice-system intercepts will increase the likelihood that system-involved individuals in most need of treatment will receive the treatment and services they need. In turn, this should reduce their probability of both subsequent system-involvement and OD.

Data required to monitor and evaluate this program include number of screenings at various intercepts, number of referrals to APRS at each intercept, and number of individuals seeking

treatment after APRS contact. Numbers and rates of fatal and non-fatal opioid ODs also will be important program outcome measures. First responders keep data on non-fatal and fatal ODs and will begin keeping data on calls to APRS. Each justice-system partner will keep data on screenings and referrals to APRS. Data prior to APRS contact will be collected and maintained by the respective partners. The APRS will collect and maintain post-referral data on individuals (whether APRS contacted the individual and whether that individual contacted CAS). Post-APRS data on individuals who end up seeking treatment and services will be maintained by CAS. Data on APRS referrals who seek treatment/services will be collected by CAS and reported to the PC, but the outcomes of these connections are not within the scope of this grant. That is, while enrollment in treatment is important to the reduction of opioid ODs, the impact beyond enrollment (whether the individual *completes* treatment or what services the individual receives) is not measured in this program.

Data-use and sharing agreements already exist among several of the criminal justice agencies and with the RP. In situations where this is not the case, agreements will be developed during the 180 day planning period to maintain the confidentiality of the individuals who may end up in the program. In addition, challenges to data sharing related to the Health Insurance Portability and Accountability Act of 1996 (HIPAA) will be addressed. Part of the planning phase will be dedicated to insuring that HIPAA compliant policies and procedures are in place related to using and sharing data required for program monitoring and evaluation. It is likely that a data use agreement, pursuant to 45 CFR 164.514(e), through which the HIPAA covered entity may disclose a limited data set to the RP will be developed and used. In the alternative, partner agencies will request permission for data sharing. The UM Institutional Review Board (IRB) will review and approve the project before implementation.

Capabilities & Competencies

The applicant for this proposal is the Shelby County Division of Community Services (SCDCS). The Director is Dorcas Young-Griffin (see attached resume). DCS houses several departments, including PTS, which connects with defendants during the pretrial period. PTS is a comprehensive criminal justice agency offering programs that are alternatives to incarceration. Other agencies within DCS, including the Community Services Agency, Veterans Services, the Office of Multicultural & Hispanic Services, and the Ryan White Program, offer opportunities to supplement medical treatment for SUD with wraparound services that these agencies provide (e.g., housing & utility assistance, HIV treatment, PTSD counseling).

The DCS will hire a full-time (40 hours per week) Project Coordinator (PC) who will cooperate with the BJA TTA provider(s), as well as with potential cross-site/national program evaluators (see attached Job Description). He/she will be trained in DCS administrative procedures and in CAS procedures related to managing the APRS. He/she will collaborate with the CAS on developing and maintaining mechanisms for collaborating with all other partner agencies, both those in the medical/health care field and in the criminal justice field. He/she will be responsible for coordinating the activities of the APRS. The DCS will supervise the PC on administrative responsibilities and the CAS will supervise the PC on tasks related to the APRS (screening and referrals). Ensuring that all partners develop policies and procedures for screening and referrals, and that they collect and maintain data related to those screenings and referrals also will be part of PC responsibilities. This person will be key player in the stakeholder team and assist in scheduling, preparing for, and running team meetings. Finally, he/she will develop and maintain a secure central database for all program data that he/she will use in the development of regular reports to stakeholder/partners, and for reporting required performance measures. The

RP will work closely with this person to develop mechanisms to monitor program progress and to evaluate the program in terms of outcomes.

Dr. David Stern, who currently serves as Robert Kaplan Executive Dean and Vice-Chancellor for Clinical Affairs for the University of Tennessee College of Medicine and the UTHSC, has direct oversight of the CAS and will be integral in this program (see attached CV). He graduated from Harvard Medical School and has a stellar record of community outreach and developing collaborative relationships to address public health problems, such as opioid addiction. The CAS provides a "hub" of expertise for patients with SUD including addiction medicine physicians, behavioral health specialists, nurse care managers, case managers, counselors, peers and others. These individuals, as well as other medical specialists, form a team supporting each patient. This multidisciplinary approach to patient care resulted in the CAS being designated the first "Center of Excellence" by the Addiction Medicine Foundation. Dr. Stern presented the Center's work at a White House invitational meeting in the fall of 2016.

The PSI at UM will be the RP and will assist in problem identification, solution design, and program evaluation. Dr. Angela Madden, Research Associate Professor, will primarily be responsible for all research activities related to this project (see attached CV). This may include recruiting and supervising other faculty with expertise in opioid addiction and treatment.

Dr. Madden will serve on the stakeholder team and assist in identifying and reporting the required COAP performance measures, as well as the specific performance measures for Category 3 to monitor program progress. She also will advise on program implementation, provide subject expertise and guidance, and provide regular performance reports to ensure that outcomes are being appropriately evaluated.

Dr. Madden has nearly 25 years of experience in conducting action research and evaluating programs. More importantly, she has extensive experience working with local and state criminal justice agencies in developing, implementing, and evaluating programs designed to address specific types of crime, such as gun violence, domestic violence, and drug offenses. This experience has contributed to her skill development in the following: 1) collecting & analyzing relevant data sets; 2) problem-solving; 3) using evidence-based strategies to address problems; 4) documenting program operations and processes; 5) measuring program outcomes; 6) using data to determine program effectiveness; 7) assessing implementation fidelity; 8) making regular presentations to task forces and implementation teams; 9) making recommendations for program improvement; and 10) developing real-time products and resources for strategic decision making.

Key medical partners include the Emergency Medical Services of the Memphis Fire Department, local emergency rooms at Regional One Health & Methodist University Hospital, Baptist Memorial Hospital, and the SCHD. These agencies will play integral roles in the program because they are where ODs and other medical complications of SUD present. The SCHD administers the medical programming inside the county jails including implementation of a withdrawal protocol for persons with known or suspected opiate addiction using the Clinical Opiate Withdrawal Scale (COWS). From October to December 2017, 960 inmates were managed with COWS with care provided to 376 inmates during that period.

The MPD and the SCSO also are essential collaborators in this project. MPD's Organized Crime Unit (OCU) has primary responsibility for investigating and controlling narcotics-related offenses within MPD's jurisdiction. The HRT is primarily responsible for investigating heroin/opioid- related ODs. While the goal of the HRT is to identify and prosecute heroin/opioid distributors, MPD believes that HRT contact with OD victims provides a critical

opportunity for referral to treatment. Director Michael Rallings will play a key role in the implementation of this project (see attached resume).

The SCSO Law Enforcement division has primary jurisdiction over the municipalities of Arlington and Lakeland, and over the unincorporated areas of Shelby County. It has a variety of specialized units, such as Special Investigations/Narcotics, and operates the two largest jails in the county with a combined capacity of 3,181 beds. The jails primarily hold pretrial defendants with the majority coming from arrests made by MPD and the SCSO. The SCSO will be committing two people to the project (one from law enforcement and one from the jail), both overseen by Chief Floyd Bonner (see attached resume).

The SCDC serves both Memphis and Shelby County, although most inmates are from Memphis. It currently has daily average of 2,100 (1,900 men, 200 women). Locally sentenced inmates are screened upon admission using the TCUDS-5 opioid supplement and those with addictions are given the opportunity to enter an institutional treatment program. However, lack of capacity means that most inmates with addictions are released before they can enter the program. This program would result in connecting individuals in need with APRS while they are still incarcerated, which may increase the likelihood that they seek treatment upon release, compensating for the lack of institutional capacity.

Prosecutors within the office of the Shelby County District Attorney General (DAG) will use the screening and referral program as a tool to connect HROD defendants to treatment. Attorney General Amy Weirich supports this program as another avenue for prosecutors to potentially divert HROD away from the criminal justice system and into treatment. Although the DAG cannot support a blanket policy of diverting all opioid-involved defendants, she is

amenable to allowing her prosecutors the flexibility to negotiate screening and referral to CAS/treatment as an option instead of incarceration.

Plan for Collecting Data Required for the Solicitation's Performance Measures

The PC will have primary responsibility for collecting, maintaining, and reporting administrative data related to this solicitation's performance measures, including those related directly to Category 3. During the 180 day planning period, the PC will work with stakeholder team representatives from involved agencies to develop regular reporting systems through which those agencies can securely transmit data on screenings, referrals, and diversions to the PC. The regular stakeholder team meetings during the implementation phase will provide opportunities for agencies to securely share data on screenings and referrals. Given that these data currently do not exist, a standard template will be developed during the planning phase for agencies to track screenings and referrals. Those data will allow for the discovery of two currently unknown subgroups: 1) the percentage of opioid-involved individuals at high risk of OD; and 2) the percentage of justice-involved individuals who are at high risk of OD. Merely determining those proportions will provide critical insight into the nature and extent of our opioid problem. In addition, the CAS and APRS will develop ways to track number of contacts with HROD and whether those individuals follow up by connecting to CAS (enroll in treatment or services).

The RP will be responsible for collecting, maintaining, and analyzing data related to program success and coordinating with the PC to report those data. First responders and law enforcement already collect data related to opioid OD incidents and victims. The RP and law enforcement agencies have existing data agreements that will remain in place during this project and that will facilitate PC reporting of those data required for performance measurement. During the planning phase, the RP will work with the other first responders to develop data agreements

so that the RP and PC can collect and report those data for performance measurement, as well as for evaluation.

Impact/Outcomes, Evaluation, and Sustainment

The goal of this program is to reduce opioid ODs through connecting HROD to treatment. To attain this outcome, this program will increase screenings for risk of OD, increase referrals to CAS, and increase the number of individuals connecting with CAS. Another outcome of interest is diversion of HROD from incarceration to CAS.

The success of this model of screening, referral and diversion on reducing opioid ODs will be evaluated through a quasi-experimental design. The treatment group will be HROD who are connected to CAS during the program period. The comparison group will be HROD who are referred to, but do not connect with, CAS during the program period. APRS will maintain lists of HROD ***referrals*** to CAS and CAS will maintain lists of HROD ***connections***. All ***referrals*** who end up as ***connections*** (treated) will be matched to ***referrals*** who do not (untreated) using Propensity Score Matching with relevant covariates (e.g., sex, race, age, substance use history, prior arrest for substance use, prior OD, justice-involvement). This process will create a group of HROD who did not connect with CAS as comparable as possible to the group of HROD who did connect with CAS. With this process, the only theoretical difference between the two groups (excluding latent confounding variables) will be the connection to CAS. Connection to CAS is considered the treatment/intervention because, in theory, all HROD will be referred to CAS. Referral will not be a variable, but connection will. This will allow for an estimation of the treatment effect by accounting for those covariates that might predict connecting with CAS. Groups will be compared on the treatment effects of subsequent OD and subsequent justice involvement. Referrals and connections will be made on a continuous basis throughout the

implementation phase. As a result, estimation of program impact will be on a rolling basis. Each quarter during the implementation period, treatment and comparison groups will be formed, with new comparison groups being developed each quarter to reflect changes in the treatment group between quarters (i.e., growth, change in composition). Quarterly, data regarding subsequent OD and subsequent justice-involvement will be collected and compared for individuals in both groups. An existing email alert system, developed by the MPD Real-Time Crime Center, will be used to automatically alert when any individual in either group has a subsequent OD or subsequent justice contact. These data will be securely stored and transmitted to protect participant confidentiality and will be available only to the RP. The hypothesis to be tested is that the treatment group will have significantly fewer subsequent ODs and significantly fewer subsequent justice contacts than the comparison group. At the end of the implementation period, a final comparison group will be constructed using PSM and compared to the final treatment group on these outcomes. Outcomes for both groups will be tracked at least 1 year past the end of the budget period to allow time for individuals enrolled in the last few months of implementation to OD or become justice-involved and they will be compared again at that time.

Although funding from this solicitation is only for 3 years, Shelby County has committed to sustaining its attack on the opioid epidemic, demonstrated by the recent $2 million allocation to UTHSC. Although screening, referral, data collection, and limited program evaluation can continue without funding, the PC and APRS cannot. However, if this program is successful at connecting individuals to treatment and services so that ODs and justice-involvement are reduced, it is likely that the state will not only fund continuation but expand the program statewide.